CLAIMS

1. A process for producing a compound of formula I:

said process comprising the steps of:

a) subjecting a compounds of formula II:

to an enzymatic diastereomeric resolution in the presence of a suitable amount of enzyme chosen from Pig Liver Esterase or Porcine Pancreatic Lipase;

b) recovering said compound of formula I

wherein;

 R_1 is chosen from C_{1-12} alkyl, C_{2-12} alkenyl, C_{2-12} alkynyl, C_{6-12} aryl, C_{3-10} heterocycle, C_{6-12} aralkyl or C_{3-10} heteroaralkyl; and

R₂ is a hydroxyl protecting group.

2. The process according to claim 1, wherein R_1 is $C_{1\text{--}12}$ alkyl.

- 3. The process according to claim 1 wherein R_2 is chosen from: $CO-C_{1-6}$ alkyl, $CO-C_{6-12}$ aryl, $CO-C_{1-6}$ alkoxy, $CO-C_{6-12}$ aryloxy, or $CO-C_{6-12}$ arylalkyl.
- 4. The process according to claim 1, wherein $\ensuremath{R_2}$ is $\ensuremath{\text{CO-C}_{6\text{-}12}}$ aryl.
- 5. The process according to claim 1, wherein the enzyme is Pig Liver Esterase.
- 6. The process according to claim 1, wherein the enzyme is Porcine Pancreatic Lipase.
- 7. The process according to claim 1, further comprising the steps of:
 - a) replacing the functional group at position C4 of the compound of formula I to produce a compound of formula V:

- b) removing the group R_2 of said compound of formula V_i
- c) recovering a compound of formula VI:

V

or a pharmaceutically acceptable salt thereof;

wherein;

B is purine or pyrimidine base or an analogue thereof.

8. The process according to claim 7, wherein B is chosen from:

wherein;

 R_3 is chosen from H, C_{1-6} alkyl, C_{1-6} acyl and $CO-R_9$; wherein R9 is H or C1-6 alkyl;

 R_4 and R_5 are each independently chosen from H, C_{1-6} alkyl, bromide, chloride, fluoride, iodide or CF_3 ; and R_6 , R_7 and R_8 are each independently chosen from H, bromide, chloride, fluoride, iodide, amino, hydroxyl or C_{3-6} cycloalkylamino.

9. The process according to claim 1, further comprising the step of recovering a compound of formula VII:

- 10. A process according to claim 1, wherein R_1 is C_{1-12} alkyl and R_2 is $CO-C_{6-12}$ aryl.
- 11. A process according to claim 1, wherein R_1 is methyl and R_2 is benzoyl.

12. A process for producing a compound of formula III:

said process comprising the steps of:

a) subjecting a compounds of formula IV:

to an enzymatic diastereomeric resolution in the presence of a suitable amount of enzyme chosen from Candida Antarctica "A" lipase, Candida Antarctica "B" lipase, Candida Lypolitica Lipase or Rhizomucor Miehei Lipase;

b) recovering said compound of formula III;

wherein;

 R_{11} is chosen from $C_{1\text{--}12}$ alkyl, $C_{2\text{--}12}$ alkenyl, $C_{2\text{--}12}$ alkynyl, $C_{6\text{--}12}$ aryl, $C_{3\text{--}10}$ heterocycle, $C_{6\text{--}12}$ aralkyl or $C_{3\text{--}10}$ heteroaralkyl; and

 R_{12} is a hydroxyl protecting group.

13. The process according to claim 12, wherein R_{11} is $C_{1\text{--}12}$ alkyl.

- 14. The process according to claim 12 wherein R_{12} is chosen from: $CO-C_{1-6}$ alkyl, $CO-C_{6-12}$ aryl, $CO-C_{1-6}$ alkoxy, $CO-C_{6-12}$ aryloxy, or $CO-C_{6-12}$ arylalkyl.
- 15. The process according to claim 12, wherein R_{12} is $CO-C_{6-12}$ aryl.
- 16. The process according to claim 12, wherein the enzyme is Candida Antarctica "A" lipase.
- 17. The process according to claim 12, wherein the enzyme is Candida Antarctica "B" lipase.
- 18. The process according to claim 12, wherein the enzyme is Candida Lypolitica Lipase.
- 19. The process according to claim 12, wherein the enzyme is Rhizomucor Miehei Lipase.
- 20. The process according to claim 12, further comprising the steps of:
 - a) replacing the functional group at position C4 of the compound of formula III to produce a compound of formula VIII:

b) removing the group R_{12} of said compound of formula VIII;

c) recovering a compound of formula IX:

or a pharmaceutically acceptable salt thereof; wherein;

B is purine or pyrimidine base or an analogue thereof.

21. The process according to claim 20, wherein B is chosen from:

wherein;

 R_3 is chosen from H, C_{1-6} alkyl, C_{1-6} acyl and $CO-R_9$; wherein R9 is H or C1-6 alkyl;

 R_4 and R_5 are each independently chosen from H, C_{1-6} alkyl, bromide, chloride, fluoride, iodide or CF_3 ; and R_6 , R_7 and R_8 are each independently chosen from H, bromide, chloride, fluoride, iodide, amino, hydroxyl or C_{3-6} cycloalkylamino.

22. The process according to claim 26, further comprising the step of recovering a compound of formula X:

- 23. A process according to claim 12, wherein R_{11} is $C_{1\text{--}12}$ alkyl and R_{12} is $CO-C_{6\text{--}12}$ aryl.
- 24. A process according to claim 12, wherein R_{11} is methyl and R_{12} is benzoyl.